

A nighttime photograph of a city skyline, likely New York City, with several skyscrapers illuminated against a dark blue sky. In the foreground, a multi-lane highway is visible, with long-exposure light trails from cars creating streaks of white and red light. The overall scene is a composite image used as a background for a presentation slide.

# Open Technologies: Classroom Applications that are Ready for Prime Time

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# Open Source Software

- Definition
  - Publicly available
  - Includes source code
  - Licensed
  - Community developed
  - Free (as in freedom, not beer)

# Open Source Software

- Why
  - Opportunity
  - Flexibility
  - Choice
  - Freedom



# Open Source Software

- BECTA Open Source Software in Schools
  - Project schools had 20–30 OSS programs relevant to the curriculum
  - There was a perception that Open Source productivity software was easier or simpler to use than the non-OSS equivalents.
  - For OSS schools, cost per PC at primary school level was half that of non-OSS schools, and cost per PC at secondary school level was around 20% less than that of the non-OSS schools.

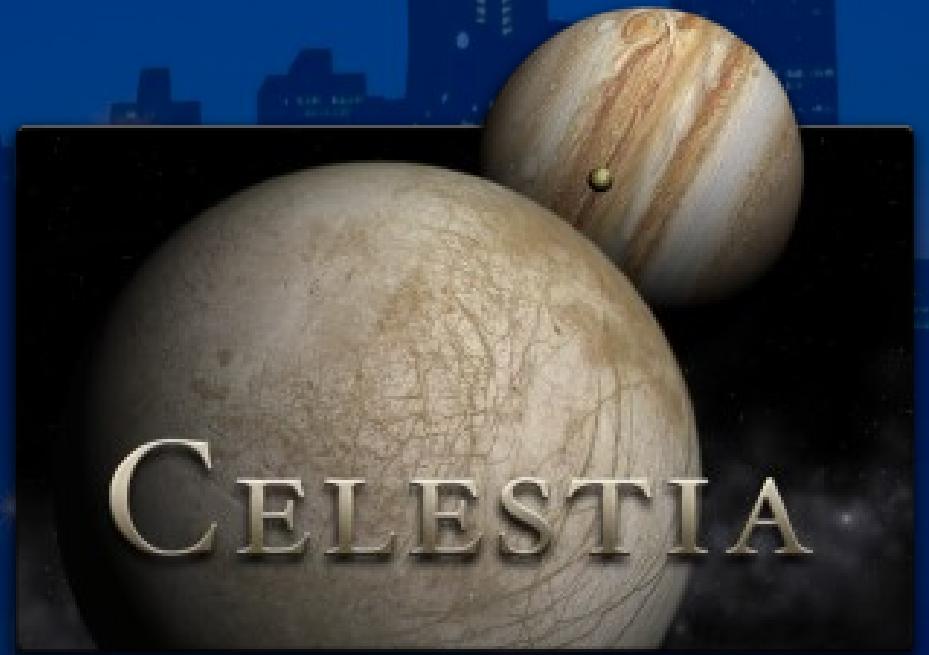
# OpenDisc and OpenEducationDisc

- High quality collection of open source software for Windows
  - To provide a free alternative to costly software
  - To educate users of Linux as an operating system



# Celestia

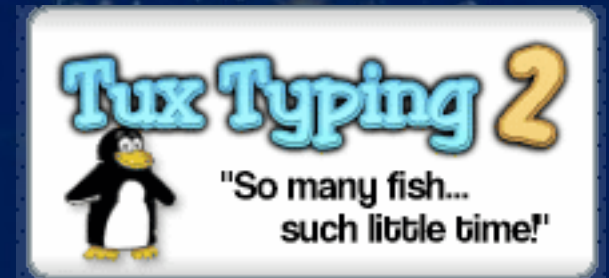
- Space simulation that lets you explore our universe in three dimensions
  - Unconfined 3D navigation
  - Seamless motion
  - Expandable





# Tux Series

- Great software for primary age kids
  - Easy to use
  - Fun sound effects
  - Encouraging mascot



# OpenOffice

- Feature-rich productivity suite
  - Word Processing
  - Spreadsheet
  - Presentation
  - Drawing
  - Database

The logo for OpenOffice.org 2.0 is displayed on a white rectangular background. It features a stylized bird icon above the text "OpenOffice.org" in a blue sans-serif font, followed by "2.0" in a larger, bold black sans-serif font.

OpenOffice.org 2.0



# Scribus

- Desktop publishing
  - Page layout
  - “Press-ready” output
  - CMYK color
  - ICC color management
  - Versatile PDF creation



**Scribus**  
Open Source Desktop Publishing

# The GIMP

- GNU Image Manipulation Program
  - Photo retouching
  - Image composition
  - Image authoring
  - Animation
  - Conversion



# Inkscape

- Vector-based graphics
  - Resolution independent, scalable graphics
  - Alpha blending
  - Complex paths





# Blender

- 3D Modeling Software
  - Modeling
  - Animation
  - Rendering
  - Post-production
  - Playback



# Audacity

- Easy to use audio editor/recorder
  - Record live audio
  - Convert tapes and records to digital
  - Edit sound files
  - Cut, copy, splice, and mix
  - Change speed & pitch



# Elgg

- Social Networking Platform
  - Blogging
  - Podcasting
  - File Storage
  - User Profiles
  - Feeds & Tags
  - Media Players





# Classroom Software

- Impact
  - Students and teachers can all use the same software
  - Reduced licensing costs
  - New opportunities for teaching and learning
  - Culture of open collaboration
  - Unintended consequences
  - Enables/boosts innovation in education technology
  - Facilitates pedagogic diversity and choice
  - Offers diversity in both context and provision of learning opportunities

# Learning Landscape of the Future

- Students and teachers using technology to create and share content in a collaborative way
- Refocus the emphasis of technology on teaching and learning
- Classroom-driven integration of content and learning resources

# Resources

CoSN K-12 Open Tech Initiative  
<http://www.k12opentech.org>

NETC Open Options for K-12  
<http://www.netc.org/openoptions>

K12OS.org  
<http://k12os.org>

K12OpenSource.com  
<http://www.k12opensource.com>

Eduforge  
<http://eduforge.org>

Schoolforge  
<http://www.schoolforge.net>

OpenOffice.org  
<http://www.openoffice.org>

InPictures (Tutorials)  
<http://inpics.net>

Gimp Image Editor  
<http://www.gimp.org>

Audacity Audio Editor  
<http://audacity.sourceforge.net>

Elgg Social Networking  
<http://www.elgg.org>

Moodle Learning Mgmt System  
<http://moodle.org>



# Resources

Celestia Astronomy

<http://www.shatters.net/celestia/>

The Celestia Motherlode

<http://www.celestiamotherlode.net>

NASA Celestia Exploration Activity

<http://learn.arc.nasa.gov/planets/>

Blender 3D Modeling

<http://www.blender.org>

Scribus

<http://www.scribus.net>

InkScape

<http://www.inkscape.org>

TuxPaint

<http://www.tuxpaint.org>

TuxMath

<http://www.newbreedsoftware.com/tuxmath/>

TuxTyping

<http://tuxtype.sourceforge.net>

OpenDisc

<http://theopendisc.com>

# Resources

Blender Classroom Manual

<http://www.cdschools.org/54223045235521/blank/browse.asp?A=383&BMDRN=2>

Schools Save Big with Open Source

<http://www.networkworld.com/weblogs/smb/2006/012953.html>

How the Open Source Movement has Changed Education: 10 Success Stories

<http://oedb.org/library/features/how-the-open-source-movement-has-changed-education-10-success-stories>

The Case for Open Source

<http://www.techlearning.com/shared/printableArticle.php?articleID=196604245>

An Argument for Open-Source Software in Education – by David Thornburg

[http://www.doe.state.in.us/inaccess/pdf/argument\\_for\\_opensource.pdf](http://www.doe.state.in.us/inaccess/pdf/argument_for_opensource.pdf)

BECTA Open source software in schools: A study of the spectrum of use and related ICT infrastructure costs

<http://publications.becta.org.uk/download.cfm?resID=25907>